

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 30 September 2004 (30.09.2004)

PCT

(10) International Publication Number WO 2004/082707 A3

(51) International Patent Classification7: 38/25, 47/34, 47/26, 47/10

A61K 38/27,

(21) International Application Number:

PCT/EP2004/050286

(22) International Filing Date: 11 March 2004 (11.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03100678.6

18 March 2003 (18.03.2003) EP

- (71) Applicant: ARES TRADING SA [CH/CH]; Zone Industrielle de l'Ouriettaz, CH-1170 Aubonne (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DONATI, Piergiorgio [IT/CH]; Rue de Lausanne 66, CH-1110 Morges (CH). SAMARITANI, Fabrizio [IT/IT]; Via Luigi Chiala 130, I-00139 Roma (IT).
- (74) Agent: SERONO INTERNATIONAL SA INTELLEC-TUAL PROPERTY DEPARTMENT; 12, Chemin des Aulx, Plan-les-Ouates, 1228 (CH).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW. GH. GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 2 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STABILISATION OF GROWTH HORMONES IN SOLUTION

(57) Abstract: The invention relates to a liquid formulation comprising a growth hormone or a, substance, which stimulates release or potentiates the activity of endogenous hGH; a polyethylene-polypropylene glycol; a citrate buffer and a stabilizer, and to a process of preparation thereof.

INTERNATIONAL SEARCH REPORT

International Application No PC. / EP2004/050286

A CLASS	SIFICATION OF SUBJECT MATTER		CH7 EF 2004/ 050286		
IPC 7	A61K38/27 A61K38/25 A61K47	7/34 A61K47/26	A61K47/10		
According	to International Patent Classification (IPC) or to both national class	sification and IPC			
	SSEARCHED	And in O			
Minimum d	focumentation searched (classification system followed by classifi	cation members			
IPC 7	A61K	canon symbols)			
Documenta	ation searched other than minimum documentalion to the extent th	at such documents are included	in the fields seemed		
	· ·	an agai, againtainta ala liicidaec	in the news searched		
5) ; ;					
Electronic o	data base consulted during the international search (name of data	base and, where practical, sea	rch terms used)		
EPO-In	iternal, WPI Data, PAJ, MEDLINE, BI	OSIS, EMBASE			
	ENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the	relevant passages	Relevant to claim No.		
X	WO 97/29767 A (CSL LTD ;UNIV MO MCNAMARA MICHAEL KEVIN (AU); CH 21 August 1997 (1997-08-21) example 3	NASH (AU); ARMAN WI)	1,2, 6-12, 16-19		
Υ	US 5 567 677 A (HOEKBY ELVY ET 22 October 1996 (1996-10-22) claim 4	AL)	1-19		
Υ	EP 0 211 601 A (INT MINERALS & (25 February 1987 (1987-02-25) page 5, line 19 page 6, line 17 page 6, line 31 - line 33	CHEM CORP)	1-19		
Furth	er documents are listed in the continuation of box C.	X Patent family membe	ers are listed in annex.		
° Special cat	egories of cited documents :	المشنا			
"A" documer conside	nt defining the general state of the art which is not ered to be of particular relevance	cited to understand the	after the international filing date n conflict with the application but principle or theory underlying the		
"E" earlier document but published on or after the international filling date "X" document of particular relevance; the claimed inventor					
	nt which may throw doubts on priority claim(s) or	Califici de considered no	wel or cannot be considered to when the document is taken alone		
citation	or other special reason (as specified)	"Y" document of particular rel	evance: the claimed Invention		
O° docume: other m	nt referring to an oral dischause use, exhibition or	document is combined w	Involve an inventive step when the		
P' documen	nt published prior to the international filing date but	in the art.	being obvious to a person skilled		
	ctual completion of the international search	*&' document member of the Date of mailing of the inte			
7	September 2004	15/09/2004			
Name and ma	ailing address of the ISA	Authorized officer			
	European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk				
Tel. (+31-70) 340–2040, Tx. 31 651 epo ni, Fax: (+31-70) 340–3016		Bayrak, S			

INTERNATIONAL SEARCH REPORT

International Application No PC EP2004/050286

			PCY/EP2004/050286		
Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9729767	Α	21-08-1997	AU	716747 B2	02-03-2000
			ΑU	1585597 A	02-09-1997
			WO	9729767 A1	21-08-1997
			CA	2246501 A1	21-08-1997
	•		CN	1214633 A ,B	21-04-1999
			EP	0889733 A1	13-01-1999
			JP	2000504696 T	18-04-2000
			RU	2191029 C2	20-10-2002
			TR	9801558 T2	23-11-1998
			US	6593296 B1	15-07-2003
				~	15-07-2003
US 5567677	Α	22-10-1996	AT	196092 T	15-09-2000
			AU	3913593 A	08-11-1993
			CA	2102693 A1	04-10-1993
			DE	69329367 D1	12-10-2000
			DE	69329367 T2	21-06-2001
			DK	587858 T3	18-12-2000
			ΕP	0587858 A1	23-03-1994
			ES -	2150940 T3	16-12-2000
			GR	3034925 T3	28-02-2001
			JP	3268557 B2	25-03-2002
			JР	6508156 T	14-09-1994
			NO	934355 A	01-12-1993
			NZ	251498 A	26-07-1995
			PT	587858 T	28-02-2001
			WO	9319776 A1	14-10-1993
		·			
EP 0211601	Α	25-02-1987	AU	6073386 A	05-02-1987
			BR	. 8603586 A	10-03-1987
			CN	86105483 A	28-01-1987
			DK	· 363086 A	31-01-1987
			ΕP	0211601 A2	25-02-1987
			JΡ	62070319 A	31-03-1987
			PT	83095 A ,B	01-08-1986
			ZA	8605704 A ´	24-06-1987